

***Roadway Design that
Safely and Effectively
Accommodates BOLD Landscaping***



***Time & Space
Early & Often
Above & Below***

Accommodating Bold Landscapes

- ◆ General concepts
- ◆ Utilities
- ◆ ITS
- ◆ Signs
- ◆ Walls
- ◆ Drainage
- ◆ Bicyclist and Pedestrian facilities



HIGHWAY BEAUTIFICATION

Make it “everyone’s business”



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD
SECRETARY

POLICY

Effective: May 15, 2013
Office: Production Support
Topic No.: 000-650-011-c

HIGHWAY BEAUTIFICATION

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- The nation's most beautiful highways that attract and grow business.
- Safe roadsides that are durable, and ecologically and economically sustainable.
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In carrying out this policy, the Department will:

- Make highway beautification *everyone's* business.
- Accommodate existing and proposed trees and other long lived plants by consistently integrating landscape conservation and highway beautification into the processes that are used to plan, design, construct, and maintain roadways.



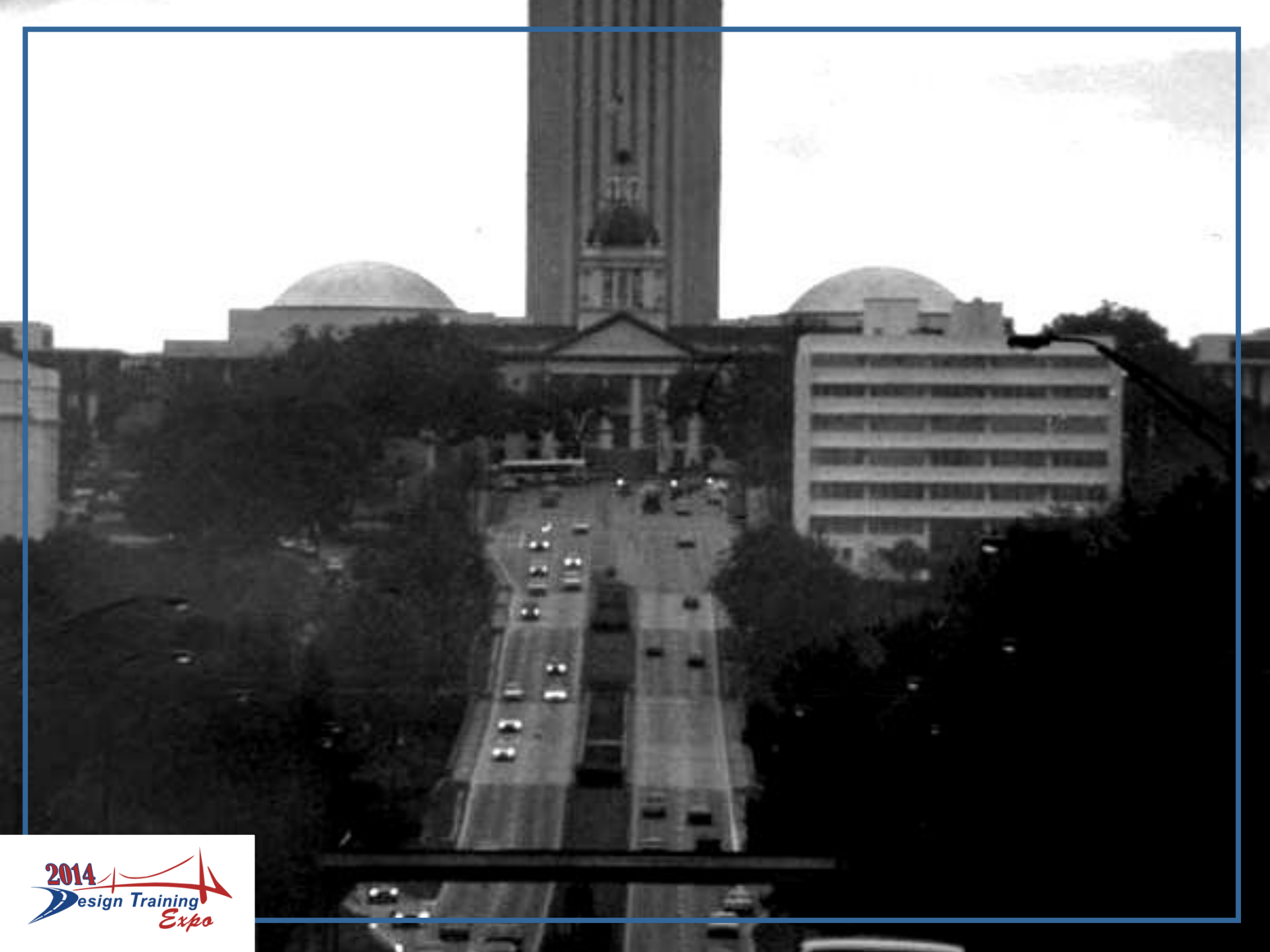
1870s



1957



1966








Biscayne Blvd Miami





We must reject the kind of “either-or approach which maintains that transportation goals are inconsistent or in contention with other personal and community aspirations.

Lowell Bridwell, FHWA Administrator
Freeway in the City 1966
A1A Daytona

Scenic Highway Along Pensacola Bay, Pensacola, F



“Attention should be given during the preliminary planning to those elements that add to the attractiveness of the route.”

ASHTO Statement of Policy 1961



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Midway 2012

Harvest time.....



Planting time.....





Below Ground





Above & Below









George Botner, ASLA

11 foot lanes?

Time and Space

Intelligent Transportation Systems and Landscape Architecture



**Designing Landscape Projects and ITS
Projects that work well TOGETHER!**

BOLD Landscaping and ITS Equipment

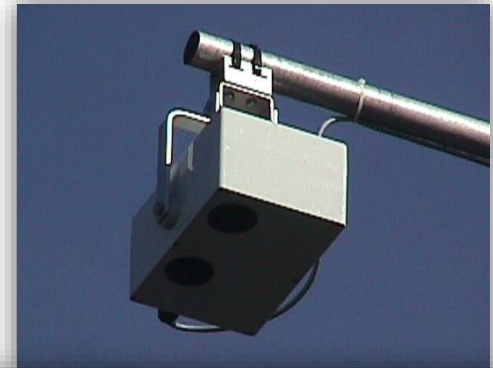
Can they co-exist?????

YES!

Knowledge ~ Coordination ~ Planning

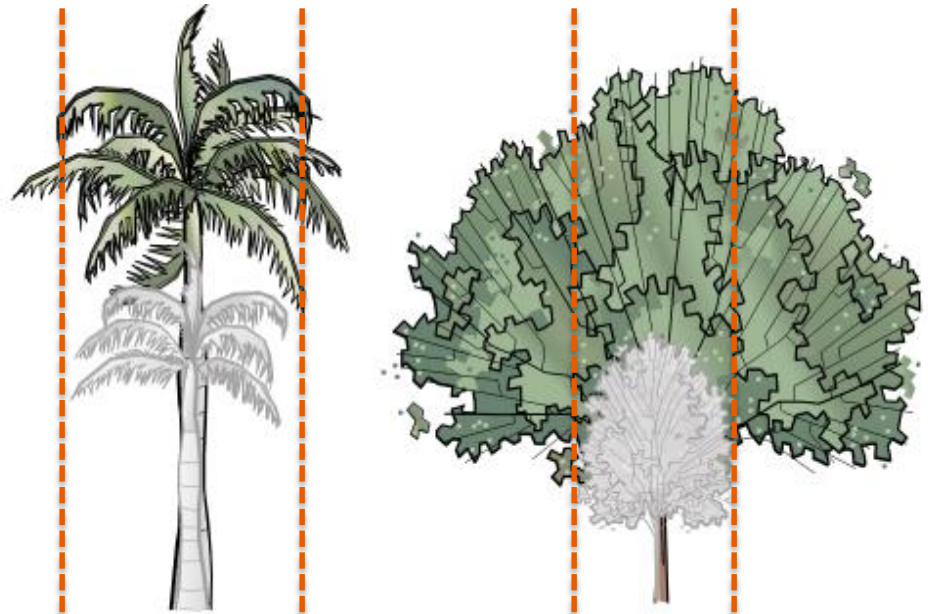
ITS Equipment Most Affected By Landscape

- ◆ Closed Circuit Television (CCTV)
- ◆ Traffic Detectors (radar)
- ◆ Dynamic Message Signs (DMS)



Key Landscape Elements

- ◆ Trees and Palms: Living materials that grow.
- ◆ When designing ITS, look for existing or potential landscape conflicts.
- ◆ Know how future growth could affect views:
 - ✓ Know mature sizes and growth habits of species



CCTV and Landscape Conflicts

- ◆ New camera installed to view ramp signal
- ◆ Signal partially blocked and view will only get worse
- ◆ Loss of Landscape area



CCTV and Landscape Conflicts

- ◆ Ramp signal has a clear view of ramp signal
- ◆ Does not eliminate existing or future landscape area
- ◆ Avoids future camera obstructions
- ◆ Camera positioning is critical

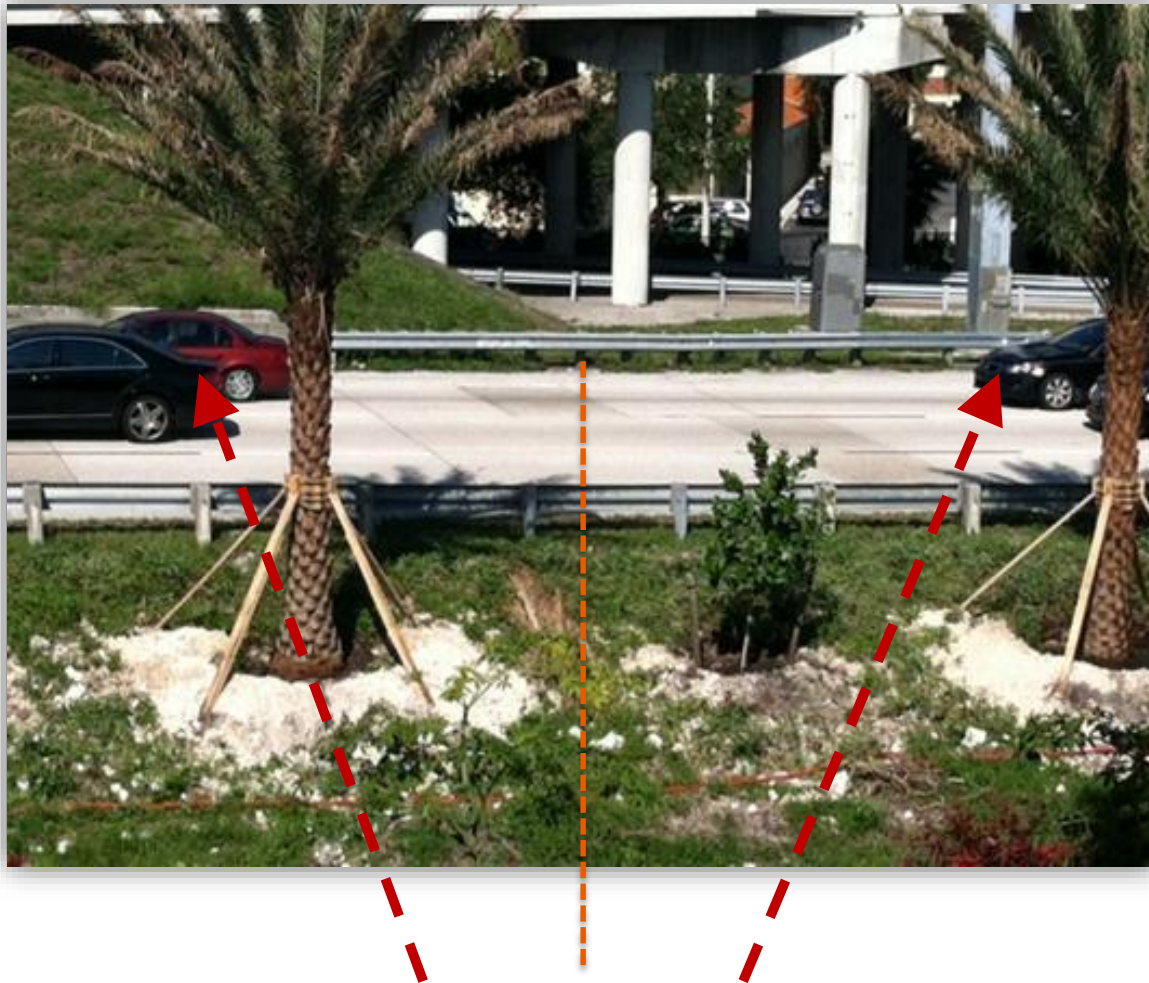


Vehicle Detectors and Landscape Conflicts



Vehicle Detectors and Landscaping Conflicts

ITS Vehicle microwave detector
“approximate” view of I-95 SB



Vehicle Detectors and Landscape Conflicts

- ◆ Place detectors as close to travel lanes as possible
- ◆ Minimizes landscape conflicts
- ◆ Leave space to accommodate future landscaping



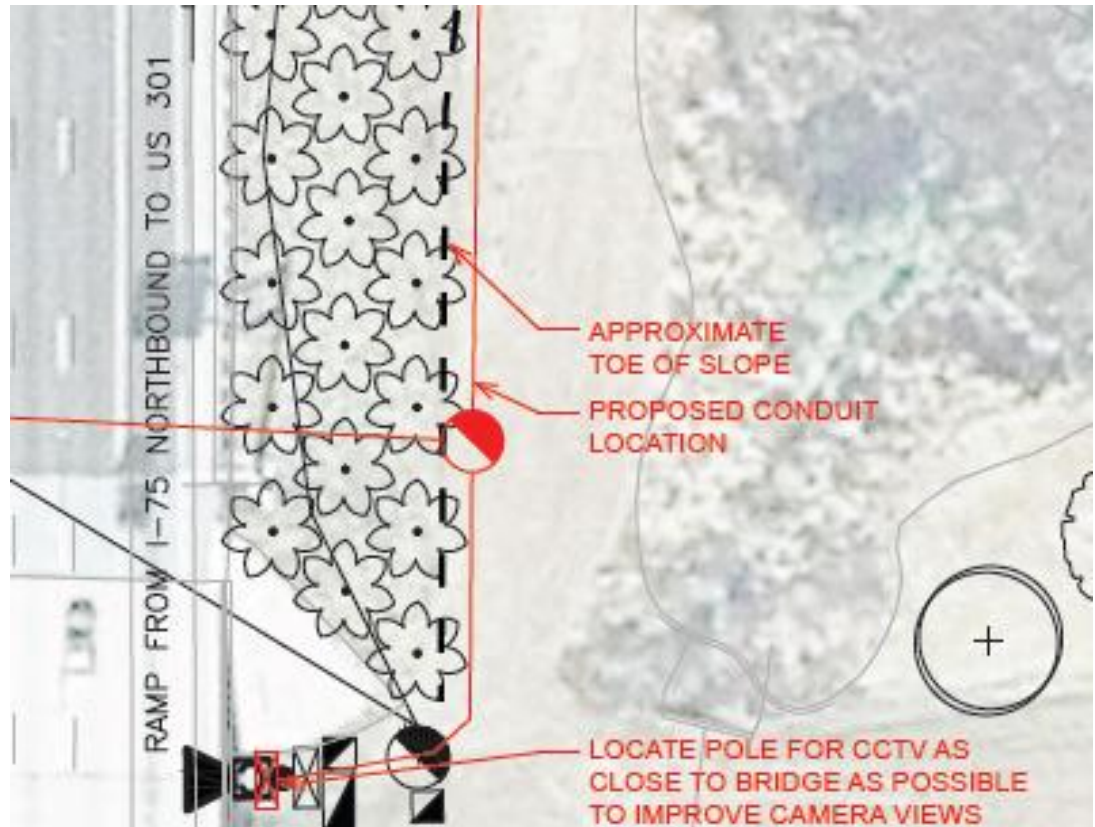
DMS and Landscape Conflicts

- ◆ DMS is visible from vehicles but not from the CCTV's
- ◆ DMS was blocked by a growing palm which may not have blocked the DMS at the time of camera installation
- ◆ Good reason to know how existing landscapes could affect devices in the future



ITS and Landscape Coordination

- ◆ Avoiding conflicts starts with planning and plan review
- ◆ Shifting conduits during design is much easier than after its installed
- ◆ Moving cameras closer to travel lanes reduces chance of obstructions and helps accommodate landscape



ITS and Landscape Coordination

- ◆ Landscape designers should be meeting with the ITS managers and reviewing the ITS views.
- ◆ Learn critical needs and higher emphasis locations
- ◆ ITS designers should be routinely meeting with the DLA's when designing ITS plans:
 - ◆ Existing landscape
 - ◆ Accommodating future landscape



ITS and Landscape Coordination

Consult with your
Landscape
Architect.....
TO AVOID THIS.



- ◆ It is easy to design landscapes that accommodate ITS features, and it is just as easy to design ITS projects to accommodate landscaping.
- ◆ With a little bit of knowledge and coordination with the appropriate staff, we can have less conflicts and more successful projects.



Sign placement vs. landscape opportunity areas





Double sided signs work going one direction...

But may limit planting going the other direction

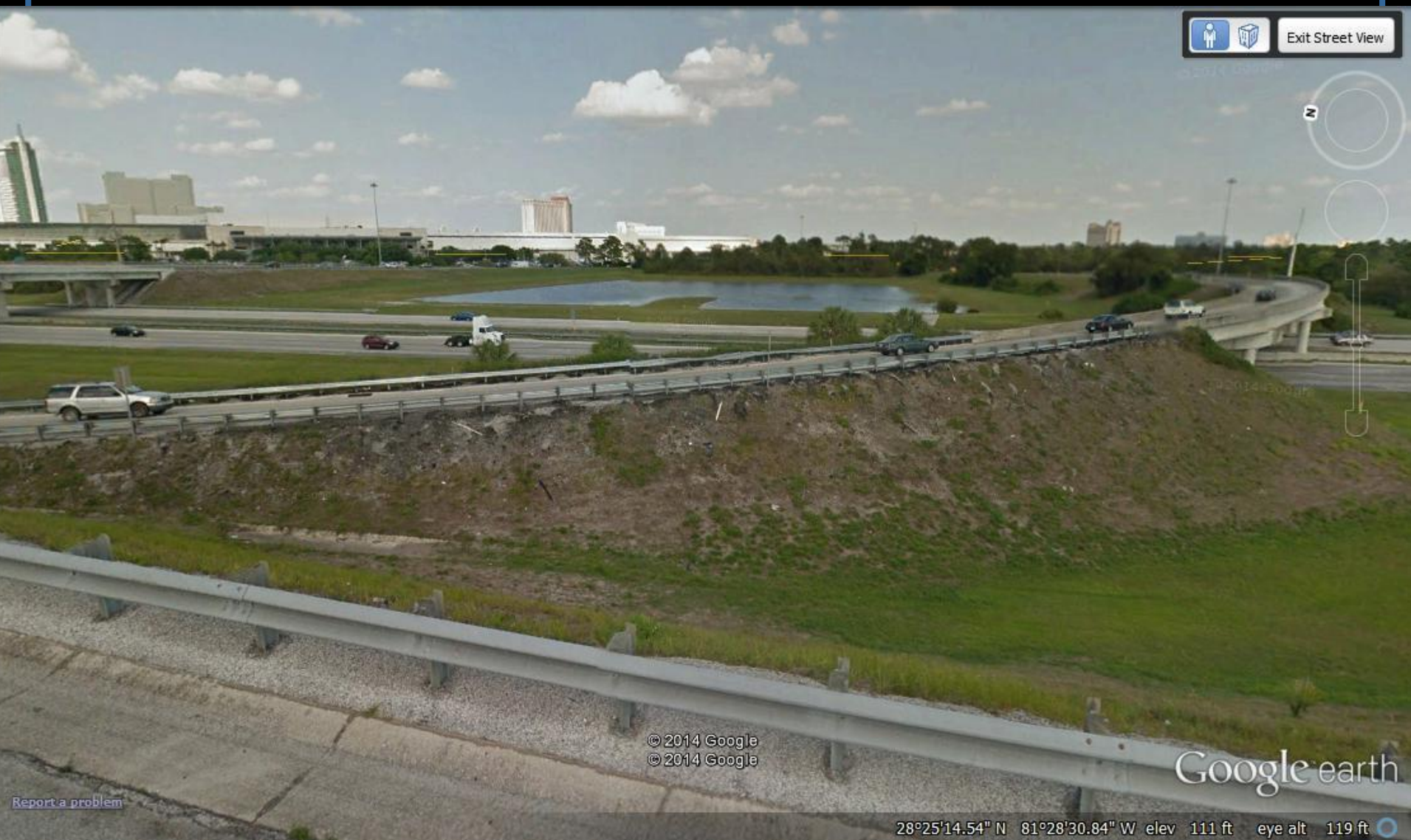


Multiple signs may allow for improved visibility of sign and accommodate median planting

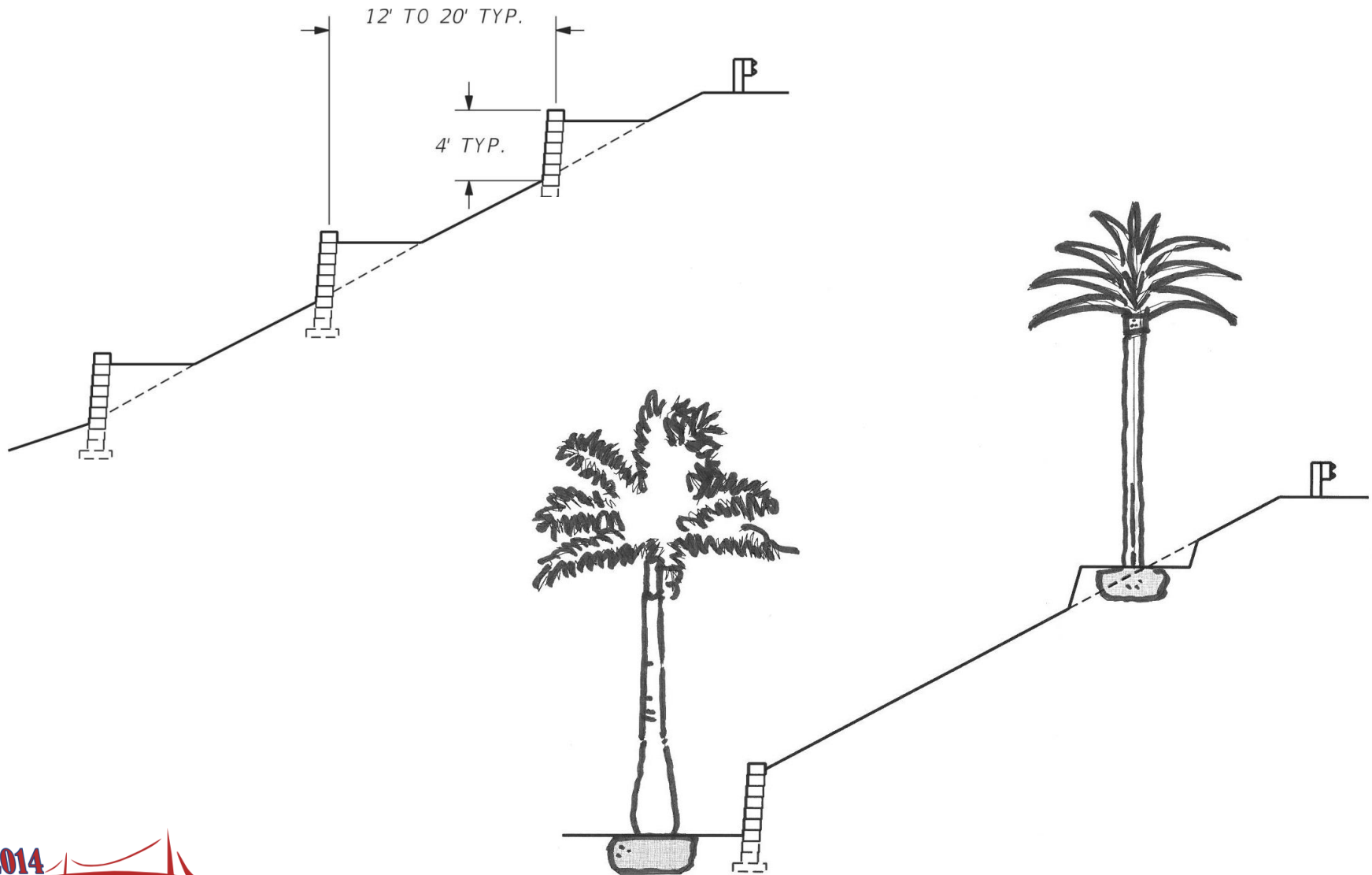


Offset signs and trees from median centerline





Create additional soil area for large rootballs with terracing on slopes











Design for plantable area between jersey barrier and MSE walls





Remove existing concrete between jersey barrier and MSE walls to create plantable area



Double guardrail vs. single to create planting space



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***Integrating Drainage and
Landscape***

A Multi-disciplinary Approach

HIGHWAY BEAUTIFICATION

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- ◆ To put "lipstick on a pig" is a rhetorical expression, used to convey the message that making superficial or cosmetic changes is a futile attempt to disguise the true nature of a product.



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Mick Coulas



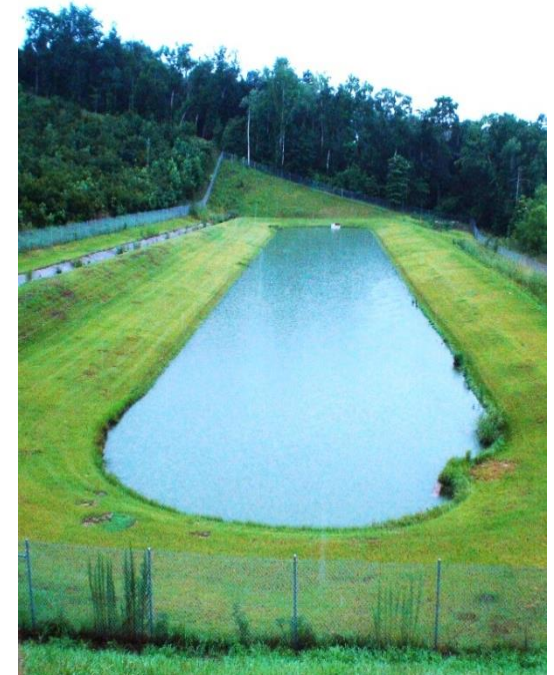
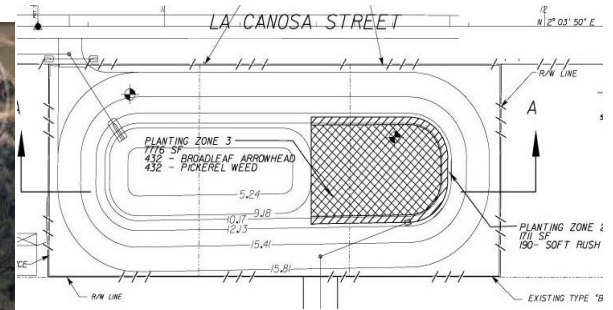
Highway Beautification

Make it “everyone's business”

“we can't solve problems using the same kind of thinking
we used when we created them”

Albert Einstein

Aesthetics are inherent in Design





Alternative Swale Treatments





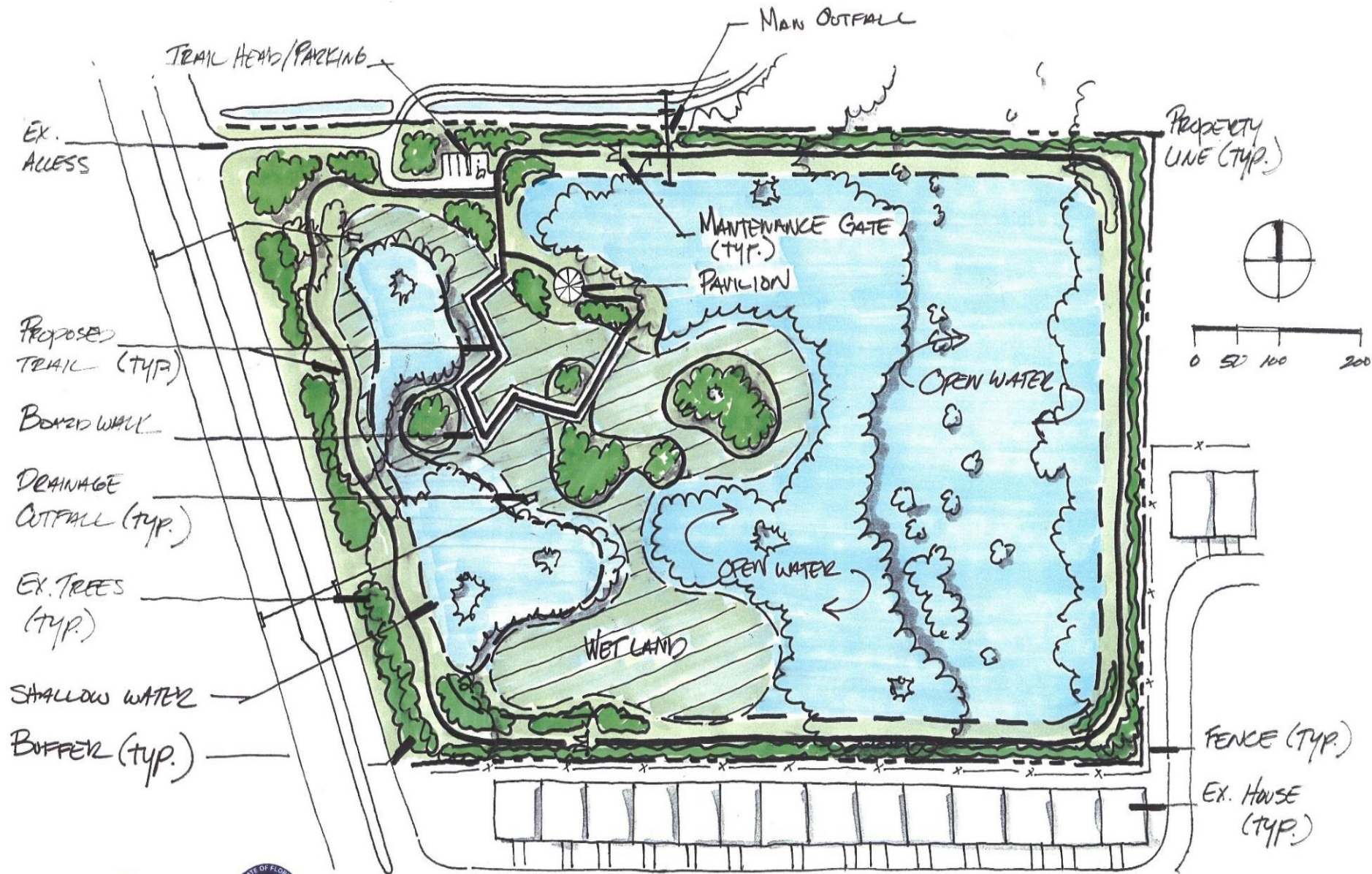




Transportation meets Storm Water



Multi-use storm water facility Atlanta Belt Line



Before you finish your pond design . . .

- ◆ Ask yourself one question:
- ◆ “Would I want to fish there?”



Pedestrians And Bicyclists



Abundant landscaping: Safe *and* Enjoyable Experience



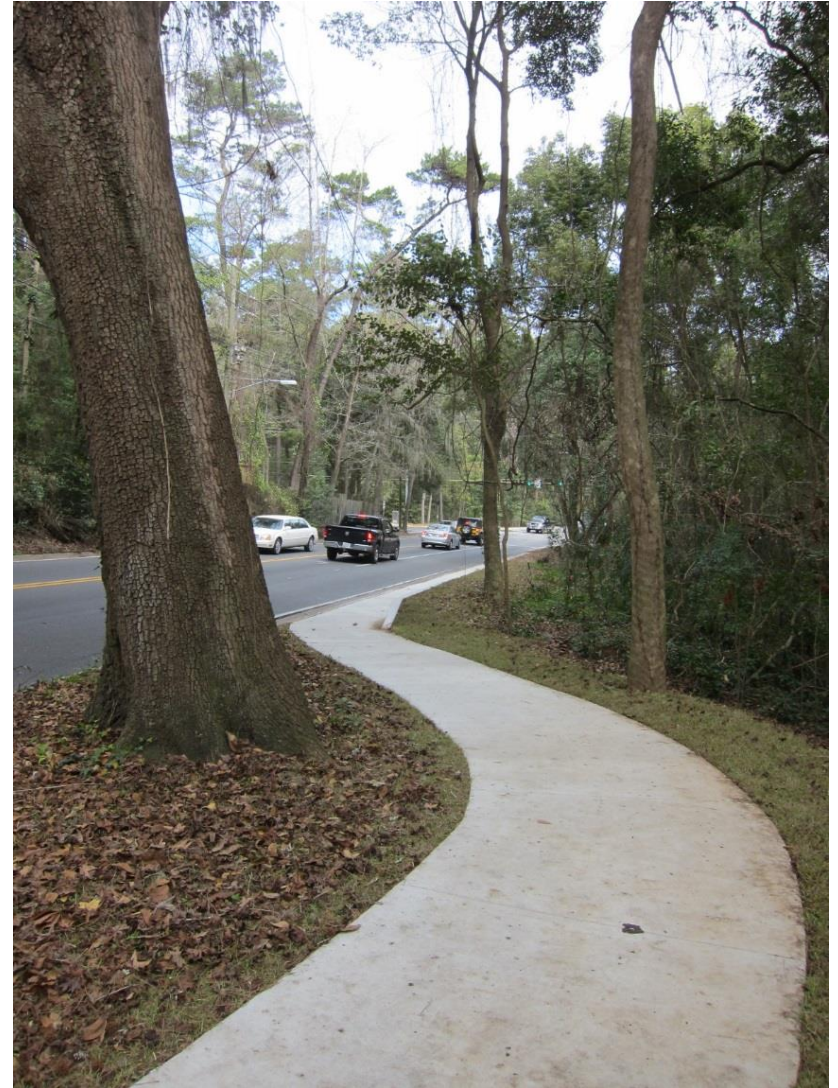
Conservation Safe *and* Enjoyable Experience



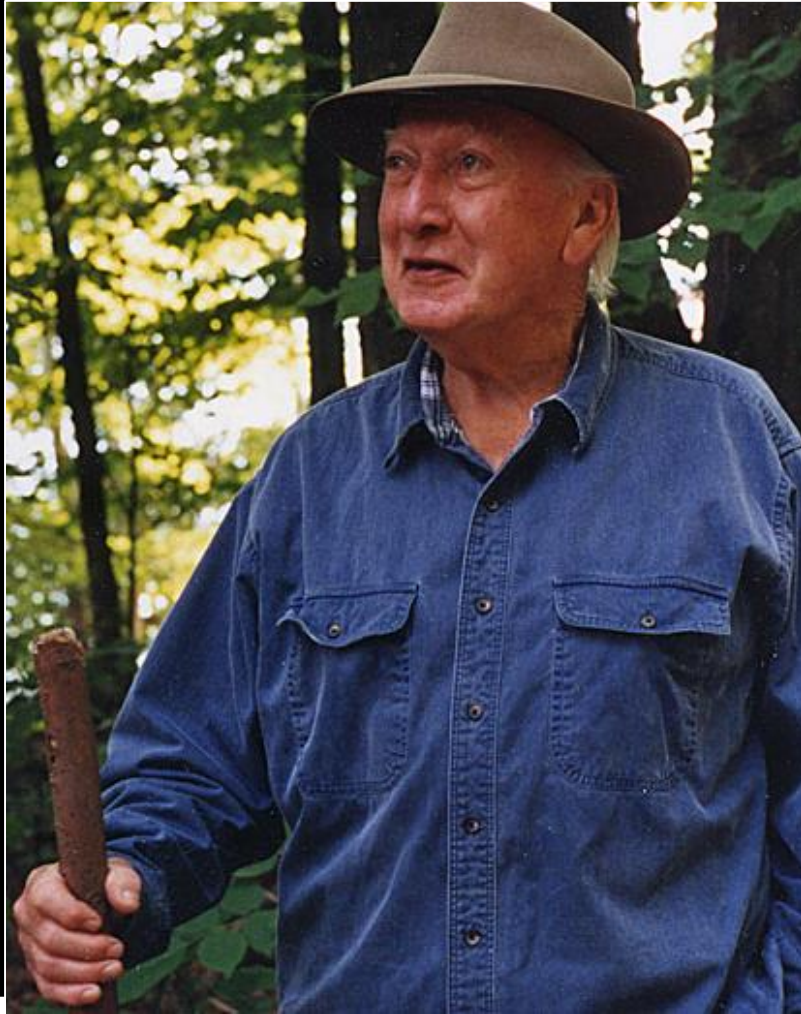
Safe and Enjoyable



Sunshine State



Questions – Comments - Suggestions



In every case, a well designed roadway will be aligned through the landscape in such a way and be so constructed as to preserve and display the best features and views while attaining a harmonious fit. A good roadway provides comfort, interest and pleasure to the traveler. A good roadway is also a good neighbor.

Landscape Architecture, A Manual of Site Planning and Design

John Ormsbee Simonds, 1961